DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
SPECIAL PROJECTS OFFICE (SPO)
PLANNED PROCUREMENTS
January 2000

PROGRAM DESCRIPTION	FUNDING	SCHEDULE	PROGRAM MGR
Sensor Integration and Modeling for Biological Agent Detection (SIMBAD): Our national defense against biological warfare (BW) and chemical warfare (CW) agents will require rapid, accurate detection and identification of these threat-agents introduced into the environment. This program seeks to transition current and emerging BW and CW sensor technologies into well-characterized sensor systems, and develop methodologies which will result in a significant improvement in sensor systems. A comprehensive effort will model, validate and optimize the performance of current and emerging sensor technologies which will provide an extension of the current knowledge and equipment capabilities to standards of performance and understanding, which will potentially far exceed the current state of the art for CW and BW sensors. The program will develop engineering models for the widest possible array of current and emerging CW and BW sensor systems at a level of detail that permits both component and system-level optimization and performance prediction.	$10M	BAA 2QFY00 Total program: 3 years	Dr. Steve Buchsbaum SPO

PROGRAM DESCRIPTION	FUNDING	SCHEDULE	PROGRAM MGR
Affordable Moving Surface Target Engagement (AMSTE) White Papers: The goal of the AMSTE program is to develop and evaluate weapon system technologies that enable precision, affordable, all-weather engagement of a wide range of moving surface targets including those on land and sea. The program will focus on the use of netted ground moving target indicator (GMTI)/synthetic aperture radar sensors to provide precision fire control for inexpensive weapons. The program is funding eight contractors for weapons systems trade studies and precision fire control tracking. Funding is available ($1M in FY99, amounts for FY00-FY01 TBD) to support the investigation of related advanced technology concepts including, but not restricted to, combat identification, advanced GMTI processing, low-cost seeker, etc. Selected individual white paper concepts are anticipated to be funded at an initial $100K level, depending on availability of funding and the nature of proposed efforts. White papers are sought from any source at any time, and they will be evaluated at intervals. For details, see http://www.rl.af.mil/div/IFK/baa/baa9901mod.html	$1M	BAA 99-01-IFKPA Closes: 5/00 Total program: 3 years	Dr. Tim Grayson SPO
MEM-Based, Large-Scale, Space-Fed Array Technology: DARPA is interested in developing the technologies, designs, and fabrication techniques that can be applied to the production of large (5-50 square meters) X-band phased-array antennas at an affordable cost. Potential applications are those that allow the antenna system to occupy a large physical volume, but limit the allowable weight and prime power consumption, such as aerostat or space-based platforms. To minimize weight and prime power consumption, the concept for the space-fed lens also utilizes micro-electromechanical (MEM) phase shifters with integrated optical controllers. DARPA wishes to initiate the development of a fully functional array section that could be a component of a larger array based on the above concept. This array section will consist of approximately 10,000 elements, and will have an area of 3 – 4 square meters, depending on the proposed element spacing. The purpose for developing this array section is to validate the full-scale array concept.	TBD	BAA 00-05 Proposals due: 2/21/00 Total program: 3 years	Dr. John Smith SPO

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MEM-Based X-Band Filter Technology: DARPA is interested in developing miniature, tunable, bandpass and bandstop, low-loss X-band filters based on microelectromechanical (MEM) technology. These filters should be capable of supporting a fixed bandwidth of approximately 100 MHz, and should have a tuning range from approximately 9.5 GHz to 11.5 GHz. This tuning range is to be covered in discrete steps that are selectable.	$500K	BAA 3QFY00 Total program: 1 year	Dr. John Smith SPO